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| MORGAN, ROBERT W | |
| ART UNIT | PAPER NUMBER |
| 3626 | |

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/470,554 | KERPELMAN ET AL. | |
| | Examiner | Art Unit | |
| | Robert W. Morgan | 3626 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-32 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Response to Amendment*

1. The amendment filed 5/31/02 in paper number 5, has been entered. Now claims 1-32 are presented for examination.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-13 and 15-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,260,021 to Wong et al. in view of U.S. Patent No. 5,867,821 to Ballantyne et al.

As per claim 1, Wong et al. teaches a method, for providing service data to medical diagnostic systems, the method comprising the steps of:

(a)—the claimed generating a diagnostic system service request for a designated diagnostic system coupled to an internal network of a medical diagnostic facility is met by the software used to process data and requests to the Picture Archival Communication (PAC) and Radiology (RI) system over the Intranet/Internet (36, Fig. 1) (see: column 3, lines 30-40), and

(b)—the claimed transmitting the request over an external network via a data communication control system coupled to a plurality of diagnostic systems over the internal network is met by the transmitting of received medical images request from network-attached

(Internet/Intranet 36, Fig. 1) clients workstation (38, Fig. 1) (see: column 3, lines 61 to column 4, lines 15).

Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images (see: column 3, lines 61 to column 4, lines 15). Wong et al. further teaches that the network-attached client workstation are configured with an object-oriented graphical interface for receiving medical image requests from a user and transmitting the requested medical image object to the requesting graphical interface (see: column 3, lines 61 to column 4, lines 15). Additionally, Wong et al. teaches a client system such as system (38, Fig. 1) that presents graphical user interfaces ("GUI") which health-care personal use to request and view medical image. The client systems are linked via network links (36, Fig. 1) to medical image server (12, Fig. 1) and links (36, Fig. 1) implement the TCP/IP suite of protocols, and accordingly, can be a campus intranet, a wide-area intranet, or even the (see: column 8, lines 53-64). This suggests via the Internet and TCP/IP protocols, that receiving and processing medical image requests at a remote service provider as well as transmitting a response from the remote service provider in response to the request at a remote service provider is a result of using the system as described above.

Wong fails to explicitly teaches:

(b)—the claimed data communication control system coupled to a plurality of diagnostic systems;

(c)—the claimed receiving and processing the request at the remote service provider; and

(d)—the claimed transmitting a response from the remote service provider in response to the request.

Ballantyne et al. teaches a method and apparatus for distributing and administering medical services and electronic medical records including an internal network that interfaces with the Hospital information network through a communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the two networks. Typical communication controllers conduct these functions and are available from vendors such as Scientific Atlanta (see: column 5, lines 6-23).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to include the communication controller as taught by Ballantyne et al. within the medical image distribution system as taught by Wong et al. with motivation of assisting the user with processing a service request, thereby providing a simpler and quicker way to access desired data over a network.

As per claim 2, Ballantyne et al. teaches the claimed response is transmitted to the data communications control system. This feature is met by the communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the internal network and the Hospital information network (see: column 5, lines 6-23).

As per claim 3, Wong et al. teaches the claimed step of transmitting the response to the designated diagnostic system via the internal network. This limitation is met by CORBA Image Interface Engine ("CIIE") that interfaces between the PAC system and medical image server (12,

Fig. 1) through the Intranet/Internet including the capabilities of transmitting client images requests or responses (see: column 7, lines 38-51).

As per claim 4, Wong et al. teaches the claimed diagnostic system service request is generated at the designated diagnostic system. This feature is met by the network-attached client workstations configured with object-oriented graphical interface for receiving medical images requests from a user at a workstation (designated diagnostic system) (see: column 3, lines 61 to column 4, lines 2).

As per claim 5, Wong et al. teaches the network-attached client workstations configured with object-oriented graphical interface for receiving medical images requests from a user (see: column 3, lines 61 to column 4, lines 2).

Wong et al. fails to teach the diagnostic system service request is generated via an interface routine provided on the data communications control system.

Ballantyne et al. teaches the communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the internal network and the Hospital information network (see: column 5, lines 6-23).

The motivation for combining the respective teachings of Wong et al. and Ballantyne et al. are discussed above in the rejection of claim 1, and incorporated herein.

As per claim 6, Wong et al. teaches communications control system is configured to store and execute communications interface routines interactively with the client and the communications interface routines include a web browser routine (see: column 3, lines 42-52 and column 3, lines 61 to column 4, lines 15).

As per claim 7, Ballantyne et al. teaches the claimed service request is generated at the data communications control system. This feature is met the communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the internal network and the Hospital information network (see: column 5, lines 6-23).

As per claim 8, Wong et al. teaches the claimed service request includes at least data identifying the designated diagnostic system. This feature is met by the location data components that stores object identifiers and other data defining current physical location and message information regarding service requests from a workstation (30, Fig. 1) (see: column 7, lines 29-37 and column 13, lines 45-58).

As per claim 9, Wong et al. teaches the claimed step of accessing operational data from the designated diagnostic system in response to the service request (see: column 2, lines 38-51).

As per claim 10, Wong et al. fails to explicitly teach the claimed service request is transmitted to the remote service provider via a first data communications medium and the response is transmitted to the medical diagnostic facility via a second data communications medium different from the first medium.

However, Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network (Internet/Intranet) -attached (36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images requests (see: column 3, lines 61 to column 4, lines 15). Additionally, Wong et al. teaches a client system such as system (38, Fig. 1) that presents graphical user interfaces ("GUI") which health-care personal use to request and view medical image. The client systems are linked via network links (36, Fig. 1) to medical image server (12, Fig. 1) and links (36, Fig. 1) implement the TCP/IP suite of protocols,

and accordingly, can be a campus intranet, a wide-area intranet, or even the (see: column 8, lines 53-64). In addition, the Examiner considers the above-mentioned networks and other such networks including wide area network (WAN) and satellite links used for high-speed transmission data as obvious feature of this system.

The obviousness of incorporating such a feature within the system of Wong et al. is as discussed above in the rejection of claim 1, and incorporated herein.

As per claim 11, Wong et al. teaches the claimed first medium includes a wide area network link. This feature is met by the use of the Internet (36, Fig. 1) to transmit users requests.

As per claim 12, Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network (Internet/Intranet) -attached (36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images requests (see: column 3, lines 61 to column 4, lines 15).

Wong et al. fails to teach the claimed second medium includes a satellite link.

Since, Wong et al. teaches the use of the Internet as a communication medium to receive and transmit medical images requests, the Examiner considers an addition of a satellite link as a second medium an obvious implementation to the system. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to include a satellite link as second medium of communication within the medical image distribution system as taught by Wong et al. with motivation of allowing computers to readily exchange information with little error, thereby ensuring the accuracy of information being transmitted over a network.

As per claim 13, Wong et al. teaches the claimed response is transmitted directly to a diagnostic system (see: column 6, lines 23-38). This feature is met by the one or more computer

system configured to transmit a composed medical images object to the requesting graphical interface (see: column 3, lines 61 to column 4, lines 30 and Fig. 1).

As per claim 15, Wong et al. fails to teaches the claimed response includes service data for addressing an operational problem of the designated diagnostic system, and wherein the method includes storing the service data for download to the designated diagnostic system.

Since Wong et al. teaches fault-tolerance architecture used to maintain the overall execution of the system, for example, providing back up servers, object coordinators or interface engines all used to maintain the operation of the system (see: column 12, lines 39-58). One of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate storing responses regarding service data addressing operational problem with diagnostic system within the other maintenance architecture such as fault tolerance as taught by Wong et al. with the motivation of providing service records and information to ensuring the continual operation of the system.

As per claim 16, Wong et al. teaches software used to process data and requests to the Picture Archival Communication (PAC) and Radiology (RI) system over the Intranet/Internet (36, Fig. 1) (see: column 3, lines 30-40). Wong et al. further teaches the transmitting of received medical images request from network-attached (Internet/Intranet 36, Fig. 1) clients workstation (38, Fig. 1) (see: column 3, lines 61 to column 4, lines 15). In addition, Wong et al. also teaches fault-tolerance architecture used to maintain the overall execution of the system, for example, providing back up servers, object coordinators or interface engines all used to maintain the operation of the system (see: column 12, lines 39-58). Moreover, Wong et al. teaches a client system such as system (38, Fig. 1) that presents graphical user interfaces ("GUI") which health-

care personal use to request and view medical image. The client systems are linked via network links (36, Fig. 1) to medical image server (12, Fig. 1) and links (36, Fig. 1) implement the TCP/IP suite of protocols, and accordingly, can be a campus intranet, a wide-area intranet, or even the (see: column 8, lines 53-64). This suggests via the Internet and TCP/IP protocols, that receiving and processing medical image requests at a remote service provider as well as transmitting a response from the remote service provider in response to the request at a remote service provider is a result of using the system as described above.

Wong et al. fails to explicitly teach the claimed processing and transmitting a service response from the remote service provider via a data communications control system.

Ballantyne et al. teaches a method and apparatus for distributing and administering medical services and electronic medical records including an internal network that interfaces with the Hospital information network through a communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the two networks. Typical communication controllers conduct these functions and are available from vendors such as Scientific Atlanta (see: column 5, lines 6-23).

The motivation for combining the respective teachings of Wong et al. and Ballantyne et al. are discussed above in the rejection of claim 1, and incorporated herein.

As per claim 17, Wong et al. teaches the claimed service request is generated at the designated diagnostic system. This feature is met by the network-attached client workstations configured with object-oriented graphical interface for receiving medical images requests from a user at a workstation (designated diagnostic system) (see: column 3, lines 61 to column 4, lines 2).

As per claim 18, Wong et al. teaches the claimed system data is stored at the diagnostic system (see: column 3, lines 52-59).

As per claim 19, Wong et al. teaches a client system such as system (38, Fig. 1) that presents graphical user interfaces ("GUI") which health-care personal use to request and view medical image. The client systems are linked via network links (36, Fig. 1) to medical image server (12, Fig. 1) and links (36, Fig. 1) implement the TCP/IP suite of protocols, and accordingly, can be a campus intranet, a wide-area intranet, or even the (see: column 8, lines 53-64). This suggests via the Internet and TCP/IP protocols, that receiving and processing medical image requests at a remote service provider as well as transmitting a response from the remote service provider in response to the request at a remote service provider.

Wong et al. fails to teach the claimed the data communications control system.

Ballantyne et al. teaches a method and apparatus for distributing and administering medical services and electronic medical records including an internal network that interfaces with the Hospital information network through a communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the two networks. Typical communication controllers conduct these functions and are available from vendors such as Scientific Atlanta (see: column 5, lines 6-23).

The motivation for combining the respective teachings of Wong et al. and Ballantyne et al. are discussed above in the rejection of claim 1, and incorporated herein.

As per claim 20, Wong et al. teaches the claimed system data is transmitted with the service request (see: column 3, lines 61 and column 4, lines 15).

As per claim 21, Wong et al. teaches the claimed system data is transmitted after the service request and in response to a prompt from the remote service provider. This limitation is met by the client system such as system (38, Fig. 1) that presents graphical user interfaces ("GUI") which health-care personal use to request and view medical image. The client systems are linked via network links (36, Fig. 1) to medical image server (12, Fig. 1) and links (36, Fig. 1) implement the TCP/IP suite of protocols, and accordingly, can be a campus intranet, a wide-area intranet, or even the (see: column 8, lines 53-64). This suggests via the Internet and TCP/IP protocols, that receiving and processing medical image requests at a remote service provider as well as transmitting a response from the remote service provider in response to a prompt from the remote service provider.

As per claim 22, it is rejected for the same reasons set forth in claim 10.

As per claim 23, Wong et al. teaches the claimed step of forwarding the response to the designated diagnostic system via the internal network. This limitation is met by CORBA Image Interface Engine ("CIIE") that interfaces between the PAC system and medical image server (12, Fig. 1) through the Intranet/Internet with the capabilities to transmit client images requests or responses (see: column 7, lines 38-51).

As per claim 24, Wong et al. teaches the claimed diagnostic systems include at least two imaging systems of different modalities. This limitation is met by the Picture Archival Communication (PAC) and Radiology (RI) system (see: Fig. 1).

As per claim 25, Wong et al. teaches a system for providing remote service to a plurality of networked medical diagnostic systems, the system comprising:

--the claimed plurality of medical diagnostic systems coupled to an internal network of a medical diagnostic facility, including designated diagnostic system is met by the software used to process data and requests to the Picture Archival Communication (PAC) and Radiology (RI) system over the Intranet/Internet (36, Fig. 1) (see: column 3, lines 30-40).

Wong et al. also teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (Internet/Intranet 36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images (see: column 3, lines 61 to column 4, lines 15).

Wong et al. fails to explicitly teach the claimed data communications control system coupled to the internal network and to an external network.

Ballantyne et al. teaches a method and apparatus for distributing and administering medical services and electronic medical records including an internal network that interfaces with the Hospital information network through a communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the two networks. Typical communication controllers conduct these functions and are available from vendors such as Scientific Atlanta (see: column 5, lines 6-23).

The motivation for combining the respective teachings of Wong et al. and Ballantyne et al. are discussed above in the rejection of claim 1, and incorporated herein.

As per claim 26, Wong et al. also teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (Internet/Intranet 36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images (see: column 3, lines 61 to column 4, lines 15). In addition, Wong et al. teaches a client system such as system

(38, Fig. 1) that presents graphical user interfaces ("GUI") which health-care personal use to request and view medical image. The client systems are linked via network links (36, Fig. 1) to medical image server (12, Fig. 1) and links (36, Fig. 1) implement the TCP/IP suite of protocols, and accordingly, can be a campus intranet, a wide-area intranet, or even the (see: column 8, lines 53-64). This suggests via the Internet and TCP/IP protocols, that receiving and processing medical image requests at a remote service provider as well as transmitting a response from the remote service provider in response to the request at a remote service provider

Wong et al. fails to teach the claimed the data communications control system.

Ballantyne et al. teaches a method and apparatus for distributing and administering medical services and electronic medical records including an internal network that interfaces with the Hospital information network through a communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the two networks. Typical communication controllers conduct these functions and are available from vendors such as Scientific Atlanta (see: column 5, lines 6-23).

The motivation for combining the respective teachings of Wong et al. and Ballantyne et al. are discussed above in the rejection of claim 1, and incorporated herein.

As per claims 27-30, they are rejected for the same reasons set forth in claims 10, 17, 24 and 15 respectively.

As per claim 31, Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (Internet/Intranet 36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images as well as disturbing

medical images from one or more storage systems (see: column 3, lines 61 to column 4, lines 15).

Wong et al. fails to teach the claimed the data communications control system.

Ballantyne et al. teaches a method and apparatus for distributing and administering medical services and electronic medical records including an internal network that interfaces with the Hospital information network through a communication controller (26, Fig. 2) (data communication control system), which is responsible for all data routing information between the two networks. Typical communication controllers conduct these functions and are available from vendors such as Scientific Atlanta (see: column 5, lines 6-23).

The motivation for combining the respective teachings of Wong et al. and Ballantyne et al. are discussed above in the rejection of claim 1, and incorporated herein.

As per claim 32, Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images (see: column 3, lines 61 to column 4, lines 15). Wong et al. further teaches that the network-attached client workstation are configured with an object-oriented graphical interface for receiving medical image requests from a user and transmitting the requested medical image object to the requesting graphical interface (see: column 3, lines 61 to column 4, lines 15).

Wong et al. fails to teach the claimed the data communications control system.

Ballantyne et al. teaches a method and apparatus for distributing and administering medical services and electronic medical records including an internal network that interfaces with the Hospital information network through a communication controller (26, Fig. 2) (data

communication control system), which is responsible for all data routing information between the two networks. Typical communication controllers conduct these functions and are available from vendors such as Scientific Atlanta (see: column 5, lines 6-23).

The motivation for combining the respective teachings of Wong et al. and Ballantyne et al. are discussed above in the rejection of claim 1, and incorporated herein.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,260,021 to Wong et al. in view of U.S. Patent No. 5,867,821 to Ballantyne et al., as applied to claim 1 above, and further in view of Official Notice.

As per claim 14, Wong et al. and Ballantyne et al. fail to teach the claimed steps of placing the service request in a queue, and transmitting the service request in accordance with an established schedule.

It is well known in the computer industry that using a queue to assign and prioritize elements for instance, schedule service requests in the order in which they are received for transmission is old and established in the art. One of ordinary skill in the art at the time the invention was made would have found it obvious to use a queue to schedule service requests within the medical image distribution system as taught by Wong et al. with motivation of arranging a fast and quick way to provide ready available medical images to an authorized user.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Morgan whose telephone number is 703-605-4441. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m. Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 703-305-9588. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

RWM
rwm
September 6, 2002

JOSEPH THOMAS
SUPERVISORY PATENT EXAMINER
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